The gas and air necks, the cinder pockets and the uptakes are next in order. The efficiency of the cinder pocket depends upon the change in the direction of the flow, as well as upon the reduction in the velocity of flow. The width of the pockets fixes the taper of the necks. Both pockets will be made the same width, say, 2 m 00 (6.56 ft) with a space of 1 m 250 (4.10 ft) between them. The gas neck will be 3 m 00 (9.84 ft) wide where it leaves the chamber, tapering to 2 m 00 in a distance of about 3 m 750 (12.3 ft). The air neck will taper from a width of 5 m 00 (16.47 ft) to 2 m 00 (6.56 ft) in the same distance. These figures have been fixed arbitrarily and the assumption made that the same or greater areas will exist than above the checkerwork.

	Gas on Gas	Air on Air	Gas on Waste Gas	Air on Waste Gas
Air and gas necks: The frictional resistance based on the following:				
Z= length of neck	3 m	4m		
S= perimeter	9 m	11 m		
SL = surface	33.75	44.00		
co = area in square	5m^2	7m^2		
OJL/ ~f- CO - . .	6.75	6.28		
Qt — volume of gases	28m^3	45m^3	35m^3	52m^3
	5m	6m	7m	7m
Aj = kg per m^3 gas	0.208	0.239	0.192	0.192
7= frictional resistance				
0.016X6	0 kg			
0 016X6 28X6 57X0		0 kg		
0 016X6 75X6 57X0			0 kg	
0 016X6 28X7 44X0				0 kg
The gas velocity in the				
slightly less than in the				
ber above the				
and is assumed the				
the cinder pockets.				
sure in kilograms per				
quired to impress these				
ties on the waste gases				
5=Aj(w/^{2}-7-20) —kg per m^2	0.354	0.525	0.495	0.543